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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,861	10/22/2001	Keiji Yurugi	Q66372	7705
23373	7590	07/26/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			PUTTLITZ, KARL J	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

## Application No.

09/982,861

## Applicant(s)

YURUGI ET AL.

## Examiner

Karl J. Puttlitz

## Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/26/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vansteenkiste et al. Preparation of Tailor-Made Multifunctional Propenyl Ethers by Radical Copolymerization of 2-(1-Propenyl)oxyethyl Methacrylate, *Macromolecules* 1999, 32, 55-59 (Vansteenkiste) in view of Bauer.

Vansteenkiste teaches Synthesis of POMEA, from methacrylic acid and methacrylic anhydride. The reaction mixture contains triethylamine. The reference teaches that the reaction organic layer is dried over magnesium sulfate. One of ordinary skill would recognize that the claimed limitation of water and oxygen content are necessarily met by this reaction See Page 56, left column.

The difference between the rejected claims and the disclosure of Vansteenkiste is that the reference fails to state that a radical polymerization inhibitor is added to the reaction. It is for this proposition that the examiner adds Bauer (of record). In this connection, Bauer teaches that it is helpful to add polymerization inhibitors to solutions of polymerizable compounds. See column 5. Accordingly, one of ordinary skill would have been motivated to add a polymerization inhibitor to the reaction mixture in order to inhibit polymerization of

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the desired compounds. Therefore the rejected claims are prima facie obvious in view of the combination of Vanstenkiste and Bauer since these references teach the claimed invention with a reasonable expectation of success.

Applicant argues that, in the process of Vansteenkiste, the remaining triethylamine (polymerization inhibitor), is removed after the dichloromethylene solution of the crude product was washed with water, dried, concentrated and distilled in vacuum to afford the pure product (page 56, left column, last paragraph). For these reasons, the product of Vansteenkiste does not contain triethylamine.

With regard to Bauer, this reference discloses that it is often helpful to add a small amount of a polymerization inhibitor. Again, Applicant argues that the polymerization inhibitor is added during the reaction for inhibition of polymerization of (meth)acrylic acid lower alkyl ester (col. 5, lines 41-43). In contrast, present claim 1 as amended specifically recites that the vinyl ether group- containing (meth) acrylic ester in the composition is used as an end product.

However, notwithstanding Applicant's argument, the Vansteenkiste teaches a composition comprising the claimed vinyl group containing methyl ester and a polymerization inhibitor. Applicant admits above that this composition exists as a "crude product". Therefore, Vansteenkiste teaches the claimed composition, given the broadest reasonable interpretation of the word "end product".

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Bauer is also added for the proposition that it is helpful to add polymerization inhibitors to solutions of polymerizable compounds. One of ordinary skill would recognize that it is useful to add polymerization inhibitors to prevent polymerization of the claimed compounds. Therefore, addition of a polymerization inhibitor is within the motivation of those of ordinary skill.

With regard to claims 5-7, the term "handling", given its broadest reasonable interpretation, reads on the drying and vacuum steps disclosed by Vanstennkiste. One of ordinary skill would expect that the oxygen requirements to met during this step.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday-Friday (alternate).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Karl J. Puttlitz  
Assistant Examiner

  
ROBTINE FOR  
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